

REMARKS

Applicant has studied the Office Action dated March 20, 2006, and has amended claims 1, 8 and 16. No new matter has been added as the new claims have support in the application as originally filed. Claims 1-14 and 16-20 are pending. Claims 1, 8 and 16 are independent claims. It is submitted that the application, as amended, is in condition for allowance. Reconsideration and reexamination are respectfully requested.

§ 102 Rejections

Claims 1, 3, 8, 9 and 11 were rejected under 35 U.S.C. § 102(b) as being anticipated by Chiang et al. ("Chiang" U.S. Patent No. 6,876,331). This rejection is respectfully traversed.

It is respectfully noted that a proper rejection for anticipation under § 102 requires complete identity of invention. The claimed invention, including each element thereof as recited in the claims, must be disclosed or embodied, either expressly or inherently, in a single reference. Scripps Clinic & Research Found. v. Genentech Inc., 927 F.2d 1565, 1576, 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991); Standard Havens Prods., Inc. v. Gencor Indus., Inc., 953 F.2d 1360, 1369, 21 U.S.P.Q.2d 1321, 1328 (Fed. Cir. 1991).

It is respectfully noted that independent claims 1 and 8 recite a second antenna that at least partially reflects electromagnetic waves emitted from the first antenna in a direction opposite to the head of a user. It is respectfully submitted that Chiang fails to disclose this limitation.

It is respectfully noted that the Examiner asserts, at page 3 of the Office action that Chiang discloses "the second antenna reflects the electromagnetic waves in the opposite direction of the head of the user" at col. 6, ll. 12-18, col. 9, ll. 3-20 and col. 7, ll. 3-10 and, specifically, asserts that "the antennas can be passive or directive." The Applicant respectfully disagrees with the Examiner's interpretation of Chiang.

It is respectfully submitted that there is no disclosure in Chiang related to using the antennas to "reflect the electromagnetic waves in the opposite direction of the head

of the user.” It is further respectfully submitted that the Examiner’s interpretation of Chiang is contrary to the disclosure therein.

It is respectfully noted that Chiang is directed to “considerations [that] should be taken into account when designing an antenna for a hand-held wireless device,” such as “mechanical characteristics to satisfy the needs of a typical user,” “an aesthetically pleasing appearance” and problems such as “multipath fading” and “inter-cell interference” in order to “maximize antenna performance, while minimizing size and manufacturing complexity.” Col. 2, line 12 to col. 3, line 67. It is submitted that none of the disclosed “considerations” are related to “reducing the effects on the human body of electromagnetic waves emitted from the terminal” by substantially reducing “the amount of electromagnetic waves that are absorbed by the human body” and “specifically away from the head,” as is the present invention. Specification at paragraphs 0002, 0013 and 0034.

It is further respectfully noted that the only disclosure in Chiang related to the body of the user is to reduce the effects of the body on signals transmitted from the “handset” by “localiz[ing] current or near fields of the antenna elements toward the base of the antenna elements” such that “negative performance effects imposed by the human hand holding the handset or the body of the handset or the body of the handset itself can be reduced.” Col. 4, ll. 38-43. It is respectfully submitted that the disclosure to localize “current or near fields of the antenna elements toward the base of the antenna elements” would actually cause a user to be subjected to **more** electromagnetic waves by directing those waves in the **same** direction of the head of the user, given the disclosed location of the “base of the antenna elements at the top or bottom of the “housing 110” as illustrated in FIGS. 1A, 1B, 1C, 2 and 8 since the “housing 110” would be next to the user’s head when the “cellular handset 100” is in use.

Moreover, it is respectfully noted that Chiang discloses that “the antenna array may be mounted at the bottom of the handset away from obstruction and absorption, such as the human brain.” Col. 6, ll. 14-17 and FIG. 1C. It is respectfully submitted that it would not be necessary to mount “the antenna array” at the bottom of the handset to avoid “absorption” by the “human brain” if the “the second antenna reflects the

electromagnetic waves in the opposite direction of the head of the user" as asserted by the Examiner.

It is further respectfully noted that the Examiner asserts, at page 2 of the Office action in response to the arguments presented in the response to the previous Office action regarding the Applicant's assertion that Chiang fails to teach "reflecting electromagnetic waves in a direction opposite the head of the user," that "Chiang et al. teaches the application of directive antennas and also wherein the antenna array may be mounted at the bottom of the handset away from obstruction and absorption such as the human brain (Col. 6 lines 12-17." The Applicant respectfully disagrees with the Examiner's assertion.

It is respectfully noted that Chiang discloses that the "passive element 104a essentially is invisible to the propagating RF energy which passes therethrough" when "the passive element operates in a directive mode." Col. 7, ll. 10-15. Therefore, it is respectfully submitted that the Examiner's assertion with regard to Chiang's disclosure of "directive antennas" is contrary to the recited second antenna that at least partially reflects electromagnetic waves emitted from the first antenna in independent claims 1 and 8 as there would be **no** reflection of electromagnetic waves by "directive antennas" that are "essentially invisible to the propagating RF energy" since the electromagnetic waves would "pass therethrough."

It is further respectfully noted that the Examiner appears to assert that the disclosure in Chiang that "the antenna array may be mounted at the bottom of the handset away from obstruction and absorption such as the human brain" is analogous to "reflecting electromagnetic waves in a direction opposite the head of the user." It is respectfully submitted that locating the "antenna array ... away from ... the human brain" is not sufficient to anticipate at least partially reflect[ing] electromagnetic waves as recited in independent claims 1 and 8 and it is respectfully requested that the Examiner provided clarification as to how the analogy is supported.

Therefore, it is respectfully asserted that Chiang fails to disclose "the second antenna reflects the electromagnetic waves in the opposite direction of the head of the user" and that independent claims 1 and 8 are allowable over the cited reference. It is

further respectfully asserted that claim 3, which depends from claim 1, and claims 9 and 11, which depend from claim 8, also are allowable over the cited reference.

Although the Applicant believes that independent claims 1 and 8 are in condition for allowance without amendment, the claims have been amended to further clarify the invention by reciting that the second antenna at least partially reflects the electromagnetic waves automatically when the mobile communication terminal is in use. It is respectfully submitted that, notwithstanding the Examiner's interpretation, Chiang fails to disclose this limitation.

It is respectfully noted that the only disclosure in Chiang of "passive elements" operating in a "reflective mode" or "reflective state" is with regard to a "switch" that is used to select between a "directive mode" or "directive state" and a "reflective node" or "reflective state." Col. 4, ll. 24-31 and col. 7, ll. 23-31. It is respectfully submitted that Chiang discloses that some action by a user is required to place the "passive elements" in a "reflective mode" or "reflective state." Therefore, it is further respectfully submitted that, even if Chiang can be interpreted to disclose a second antenna that at least partially reflects the electromagnetic waves, Chiang fails to disclose the second antenna at least partially reflects the electromagnetic waves automatically when the mobile communication terminal is in use.

§ 103 Rejections

Claims 2, 4, 10 and 13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Chiang in view of Bauregger et al. ("Bauregger" U.S. Publication No. 2003/0214443). This rejection is respectfully traversed.

The Federal Circuit has provided that an Examiner must establish a case of prima facie obviousness. Otherwise the rejection is incorrect and must be overturned. As the court recently stated in In re Rijkaert, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993):

"In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. Only if that burden is met, does the burden of coming forward with evidence or argument shift to the applicant. 'A prima facie case of obviousness is established when the teachings from the prior art itself

would appear to have suggested the claimed subject matter to a person of ordinary skill in the art.' If the examiner fails to establish a prima facie case, the rejection is improper and will be overturned." (citations omitted.)

It is respectfully submitted that Bauregger fails to cure the deficiencies of Chiang with respect to a second antenna that at least partially reflects electromagnetic waves emitted from the first antenna and the reflection is performed automatically when the mobile communication terminal is in use, as recited in independent claims 1 and 8. Therefore, it is respectfully asserted that claims 1 and 8 are allowable over the cited combination of references. It is further respectfully asserted that claims 2 and 4, which depend from claim 1, and claims 10 and 13, which depend from claim 8, also are allowable over the cited combination of references.

Claims 5 and 14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Chiang in view of Shiraki et al. ("Shiraki" U.S. Publication No. 2001/0024944). This rejection is respectfully traversed.

It is respectfully submitted that Shiraki fails to cure the deficiencies of Chiang with respect to a second antenna that at least partially reflects electromagnetic waves emitted from the first antenna and the reflection is performed automatically when the mobile communication terminal is in use, as recited in independent claims 1 and 8. Therefore, it is respectfully asserted that claims 1 and 8 are allowable over the cited combination of references. It is further respectfully asserted that claim 5, which depends from claim 1, and claim 14, which depends from claim 8, also are allowable over the cited combination of references.

Claims 6, 7, 12, 16 and 18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Chiang in view of Katagishi et al. ("Katagishi" U.S. Publication No. 2004/0063476). This rejection is respectfully traversed.

It is well-settled that a reference must provide some motivation or reason for one skilled in the art (working without the benefit of the applicants' specification) to make the necessary changes in the disclosed device. The mere fact that a reference may be modified in the direction of the claimed invention does not make the modification obvious unless the reference expressly or impliedly teaches or suggests the desirability

of the modification. In re Gordon, 221 USPQ 1125, 1127 (Fed. Cir. 1984); Ex parte Clapp, 227 USPQ 972, 973 (Bd. App. 1985); Ex parte Chicago Rawhide Mfg. Co., 223 USPQ 351, 353 (Bd. App. 1984).

The Federal circuit has consistently held that hindsight reconstruction does not constitute a prima facie case of obviousness under 35 U.S.C. § 103. In re Geiger, 2 USPQ2d 1276 (Fed Cir. 1987). Indeed, it is not proper under 35 U.S.C. 103 to modify a prior art patent in a manner which would destroy that on which the invention of the prior art patent was based. Ex parte Hartman, 186 USPQ 366, 367 (PTO Bd. App. 1974).

It is respectfully submitted that the Examiner has not established the required motivation to modify the Chiang invention by the teachings of Katagishi. It is further respectfully submitted that Katagishi teaches away from the combination of references.

It is respectfully noted that the only motivation given by the Examiner for the modification of the Chiang invention by the teachings of Katagishi is provided at page 8 of the Office action, where the Examiner asserts that Katagishi is "in the same field of endeavor" and the combination would "improve [the] design and ergonomics of the mobile terminal." It is respectfully submitted that there is no motivation provided by either Chiang or Katagishi to "improve the ergonomics" of the Chiang mobile communication handset. Therefore, it is respectfully asserted that the only motivation upon which the Examiner has relied to modify the Chiang invention by the teachings of Katagishi is the teachings of the present specification and, therefore, has engaged in impermissible "hindsight reconstruction."

It is respectfully noted that, in addition to reciting that the second antenna reflects electromagnetic waves emitted from the first antenna when the terminal is in use, independent claim 16 further recites that the first antenna is adapted to be withdrawn from the main body and the second antenna is attached to the foldable portion or, in other words, that the first antenna and second antenna are located on **different** portions of the mobile communication terminal and that the second antenna reflects electromagnetic waves emitted from the first antenna when the terminal is in use, or in the open configuration. It is further respectfully noted that the only configuration disclosed in Katagishi in which "antenna 4" and "antenna 5" are located on **different**

" housings " of the mobile communication terminal is the " fourth embodiment " of FIG. 5, which is disclosed in paragraphs 0033 and 0034. However, it is further respectfully noted that Katagishi discloses " the positions of the antennas are separated from each other " in the " fourth embodiment " such that the configuration " suppresses interaction between the antennas. "

Notwithstanding that there is insufficient motivation to modify the Chiang invention with the teachings of Katagishi, it is respectfully submitted that Katagishi teaches away from the combination by teaching to " suppress " interaction between the antennas, while Chiang, as asserted by the Examiner at page 7 of the Office action, teaches interaction between the antennas in that " the second antenna reflects electromagnetic waves emitted from the first antenna when the terminal is in use. Therefore, it is respectfully submitted that, even if the Chiang invention were modified by the teachings of Katagishi, the combination would **not** produce a first antenna that is adapted to be withdrawn from the main body and a second antenna that is attached to the foldable portion wherein the second antenna reflects electromagnetic waves emitted from the first antenna when the terminal is in use.

Notwithstanding that the combination of Chiang and Katagishi is improper, it is respectfully noted that independent claim 16 has been amended in a similar manner as independent claims 1 and 8 to recite the second antenna automatically reflects electromagnetic waves emitted from the first antenna when the terminal is in use. It is respectfully submitted that Katagishi fails to cure the deficiencies of Chiang with respect to a second antenna that at least partially reflects electromagnetic waves emitted from the first antenna and the reflection is performed automatically when the mobile communication terminal is in use, as recited in independent claims 1 and 8, as well as the second antenna automatically reflects electromagnetic waves emitted from the first antenna when the terminal is in use, as recited in independent claim 16. Therefore, it is respectfully asserted that independent claims 1, 8 and 16 are allowable over the cited combination of references. It is further respectfully asserted that claims 6 and 7, which depend from claim 1, claim 12, which depends from claim 8, and claim 18, which depends from claim 16, also are allowable over the cited combination of references.

Claims 17 and 19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Chiang in view of Katagishi and in further view of Bauregger. This rejection is respectfully traversed.

It is respectfully submitted that Katagishi and Bauregger fail to cure the deficiencies of Chiang with respect to the second antenna automatically reflects electromagnetic waves emitted from the first antenna when the terminal is in use, as recited in independent claim 16. Therefore, it is respectfully asserted that claim 16 is allowable over the cited combination of references. It is further respectfully asserted that claims 17 and 19, which depend from claim 16, also are allowable over the cited combination of references.

Claim 20 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Chiang in view of Katagishi and in further view of Shiraki. This rejection is respectfully traversed.

It is respectfully submitted that Katagishi and Shiraki fail to cure the deficiencies of Chiang with respect to the second antenna automatically reflects electromagnetic waves emitted from the first antenna when the terminal is in use, as recited in independent claim 16. Therefore, it is respectfully asserted that claim 16 is allowable over the cited combination of references. It is further respectfully asserted that claim 20, which depends from claim 16, is allowable over the cited combination of references.

CONCLUSION

In light of the above remarks, Applicant submits that the claims 1-14 and 16-20 of present application are in condition for allowance. Reexamination and reconsideration of the application, as amended, are requested.

No amendment made was related to the statutory requirements of patentability unless expressly stated herein; and no amendment made was for the purpose of narrowing the scope of any claim, unless Applicant has argued herein that such amendment was made to distinguish over a particular reference or combination of references.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California, telephone number (213) 623-2221 to discuss the steps necessary for placing the application in condition for allowance.

Respectfully submitted,

Lee, Hong, Degerman, Kang & Schmadeka

By: 

Richard C. Salfelder
Registration No. 51,127
Attorney(s) for Applicant(s)

Date: July 20, 2006

Customer No. 035884